



## Science Toolkit: Grade 6 Objective 3.D.1.b

Student Handout: Science: Grade 6 Objective 3.D.1.b

Standard 3.0 Life Science

Topic D. Evolution

Indicator 1. Explain that in any particular environment, the growth and survival of organisms and species depend on the physical conditions.

Objective b. Explain that in all environments-freshwater, marine, forest, desert, grassland, mountain, and others-organisms with similar needs may compete with one another for resources, including food, space, water, air, and shelter.

Selected Response (SR) Item

Question

Use the technical passage '[Nature's Bug Zappers](#)' to answer the following.

Which type of organism would most likely compete with bats for food?

- A. birds that consume seeds
- B. insects that consume leaves
- C. mosquitoes that consume blood
- D. amphibians that consume insects

Correct Answer

D. amphibians that consume insects

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## Handouts

## Nature's Bug Zappers

### Bats

Just the word makes some people cringe.<sup>1</sup> However, bats are probably the most misunderstood animals. Despite what movies, television and literature would have you believe, bats don't terrorize the night.

Bats are incredibly important not only to our natural world but to our economy. As primary predators of night-flying insects, bats help to control many of our most annoying pests. A single little brown bat can catch 1,200 mosquito-sized insects in an hour. Big brown bats consume costly crop pests including cucumber beetles, June beetles, leafhoppers, cutworm moths and corn earworm moths.

Bats are not blind. Those that do hunt in the dark have developed a system to help detect objects. These bats produce sounds at high frequencies. By listening to the echoes of these sounds, bats are able to discern<sup>2</sup> objects. This is known as echolocation. Using the reflected sounds, they form pictures in their brains just like we do by interpreting reflected light with our eyes.

### What's Happening to Bats?

Disturbance by people is a major cause of decline in many bat populations. They are also threatened by loss of feeding or roosting habitat, usually wooded areas near water sources.

Disturbing a maternity colony<sup>3</sup> can cause mothers to drop their young or move them to a less suitable site. Disturbance during hibernation wakes bats, causing them to burn the precious fat reserves they have stored for the winter. Even responsible cave explorers can inadvertently<sup>4</sup> disturb bats at critical times of the year.

As traditional roosts in trees and caves have been destroyed, many bats seek shelter in man-made structures. Scientists have studied the roosting requirements of bats in order to provide artificial homes. Some bats use these bat houses quite successfully.

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<sup>1</sup>cringe - shrink away, flinch

<sup>2</sup>discern - see clearly

<sup>3</sup>maternity colony - a group of female bats with offspring

<sup>4</sup>inadvertently - accidentally